AMENDMENTS TO THE CLAIMS

Please amend the claims as shown in the listing of the claims below. The listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Previously presented) A process for the direct production of desacetylcephalosporin C comprising culturing a strain of *Acremonium chrysogenum* containing nucleic acid encoding enzymes for cephalosporin C biosynthesis and a recombinant nucleic acid encoding *Rhodosporidium* cephalosporin esterase under conditions wherein the temperature is about 22°C to about 29°C and the pH is about 5.5 to about 7.5 resulting in the synthesis of cephalosporin C and expression of cephalosporin esterase wherein the cephalosporin C so produced is converted to desacetylcephalosporin C and the chemical breakdown of cephalosporin C to 2-(D-4-amino-4-carboxybutyl)-thiazole-4-carboxylic acid is less than 40%.

2. Cancelled.

3. (Currently amended) The process of Claim 1 wherein the chemical breakdown of cephalosporin C to 2-(D-4-amino-4-carboxybutyl)-thiazole-4-~~caroxylic~~carboxylic acid is less than 30%.

4. (Currently amended) The process of Claim 1 wherein the chemical breakdown of cephalosporin C to 2-(D-4-amino-4-carboxybutyl)-thiazole-4-~~caroxylic~~carboxylic acid is less than 20%.

5. (Currently amended) The process of Claim 1 wherein the chemical breakdown of cephalosporin C to 2-(D-4-amino-4-carboxybutyl)-thiazole-4-~~caroxylic~~carboxylic acid is less than 10%.

6. (Currently amended) The process of Claim 1 wherein the chemical breakdown of cephalosporin C to 2-(D-4-amino-4-carboxybutyl)-thiazole-4-~~caroxylic~~carboxylic acid is less than 5%.

7. Cancelled

8. (Previously presented) The process of Claim 1 carried out at a temperature of about 25°C to about 29°C and a pH of about 6.2 to about 7.0, during the vegetative cell growth phase; and at a temperature of about 22°C to about 26°C and a pH of about 5.7 to about 6.5 during the desacetylcephalosporin C production phase.

9. (Previously presented) The process of Claim 1 wherein the recombinant nucleic acid encoding *Rhodosporidium* cephalosporin esterase is DNA.

10. (Previously presented) The process of Claim 1 wherein the recombinant nucleic acid encoding *Rhodosporidium* cephalosporin esterase is DNA and a part of a plasmid.

11. (Previously presented) The process of Claim 10 wherein the recombinant nucleic acid encoding *Rhodosporidium* cephalosporin esterase has the sequence of SEQ ID NO: 1 or 3.

12. Cancelled.

13. Cancelled.

14. (New) The process of Claim 1, wherein the expression of cephalosporin esterase is under the control of a *Aspergillus nidulans* trpC gene promoter.

15. (New) A process for the direct production of desacetylcephalosporin C comprising culturing a strain of *Acremonium chrysogenum* containing nucleic acid encoding enzymes for cephalosporin C biosynthesis and a recombinant nucleic acid encoding *Rhodosporidium* cephalosporin esterase, the recombinant nucleic acid having SEQ ID NOs:1 or 3, under conditions wherein the temperature is about 22°C to about 29°C and the pH is about 5.5 to about

7.5 resulting in the synthesis of cephalosporin C and expression of cephalosporin esterase wherein the cephalosporin C so produced is converted to desacetylcephalosporin C and the chemical breakdown of cephalosporin C to 2-(D-4-amino-4-carboxybutyl)-thiazole-4-carboxylic acid is less than 40%.

16. (New) A process for the direct production of desacetylcephalosporin C comprising culturing a strain of *Acremonium chrysogenum*, identified as ATCC Deposit no. 74482, containing nucleic acid encoding enzymes for cephalosporin C biosynthesis and a recombinant nucleic acid encoding *Rhodosporidium* cephalosporin esterase under conditions resulting in the synthesis of cephalosporin C and expression of cephalosporin esterase wherein the cephalosporin C so produced is converted to desacetylcephalosporin C.